SAHEL MASTER'S TRAINING IN AGRICULTURAL ECONOMICS

(African Development Program, AID/afr-C-1267)

Final Report

by

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Introduction

The Sahel Master's Training Program was designed to train bilingual agricultural economists who, upon returning to their home countries, would have acquired capabilities in economic analysis, agricultural planning, development administration and field research. The program was conceived in direct response to Sahelian governments' growing recognition of the important role of agricultural economists in development programs.

While the demand for the services of agricultural economists in the Sahel expanded, the educational facilities of the region remained severely constrained. Within West Africa, only Ghana, Nigeria and Sierra Leone had undergraduate programs in agricultural economics; the first two had initiated graduate programs as well. None of the academic institutions of the Sahelian countries, however, granted degrees in agricultural economics. At the time the Sahel Master's Training Program was undertaken, agricultural economics or rural economy formed ancillary course material under the French system of agricultural education.

Given the academic resource constraints of West Africa, it was originally conjectured that for at least ten years the Sahelian countries would need to rely on third country institutions (external to the region) for graduate training. Because it was felt that much of the demand for master level training in agricultural economics stemmed from the lack of availability of an undergraduate specialization in this area, the development of such specializations was seen to offer potential for reducing the need for graduate studies in foreign countries in the future. Until such a time, however, the Sahel Master's Training Program was to provide the facilities to meet the growing need for agricultural economists.

Qualifications of Michigan State University

Unique qualifications of both the Department of Agricultural Economics and Michigan State University constituted an appropriate setting for training of Sahelian agricultural economists. Collectively, the Department and the University as a whole exhibited

strong institutional capabilities, a history of development work and experience in training English speaking and, more recently, French speaking African students. At the time the Sahel Master's Training Program was initiated, the Department of Agricultural Economics had evidenced its competence in undertaking grass roots level development programs, including an integrated rural development program in Burkina Faso, consulting services to USAID missions in Burkina Faso and Niger, the development and maintenance of a library comprised of over 3,500 publications and materials related to Africa, and a proposed series of studies on food policy and animal traction in the Sahel.

Statement of Work

The contract was developed primarily to provide assistance in expanding the capacity of the Department of Agricultural Economics to include services tailored to the needs of Sahelian students. Specifically, services performed under this contract were to create staff and support capabilities to help select, train and provide post-graduate field support for program participants. Over a seven year period, 26 bilingual Sahelian agricultural economists were to be trained. The following six "areas of attention" were outlined as part of the department's commitment to USAID (as stated in the contract):

1. Assisting the AID field offices and host governments in the Sahel to identify and screen qualified candidates for the training program. This will entail establishing and maintaining contacts with institutions and key individuals in governments, universities, and elsewhere who may know of likely candidates. This will require on-the-spot contact.
2. Arranging adequate English language and economics training for each Sahelian participant according to individual needs to enable each participant to enroll for six credit hours of master's level course work in the first term at MSU. This might involve a cooperative arrangement between Georgetown University and either Howard University or the Atlanta University Center, with training also at the Economics Institute, Boulder, Colorado.

3. Ensuring that the master's program is suited in course content, research projects and in supplemental tutoring and guidance, to the heavily operational requirements of the positions which the Sahelian candidates will fill upon their return home.

4. Supportng the Sahelian participants in their course work after reaching MSU including supplemental English language and mathematics/statistics preparation as required.

5. Providing on-the-spot field follow-up for graduates of the program who returned to positions in the Sahel, both to help them with questions of applying techniques they have learned to actual work situations and to provide feedback which may help improve the program at MSU, particularly towards helping it to become operationally oriented.

6. Assisting with the replication of this training, both in the United States and, most importantly, in Francophone West Africa itself. Specifically, MSU will involve minority institutions with regard to this program and will provide technical assistance to them for mounting similar programs within those institutions. Virginia State and Southern University are examples of two such institutions with proven capability in agricultural economics.

Fulfillment of Work Objectives

The overall objective was to recruit and educate 26 Sahelian students to the M.S. level with an intensive training program. As indicated in Appendices A and B, 27 students have completed an intensive M.S. degree program as specified in the original proposal. In addition, three more students are expected to complete within the next few months.

The following discussion summarizes accomplishments of the program with reference to the six "areas of attention." Each area is dealt with separately. Observations contributing useful information to assist in the execution of future training programs, yet not directly related to work tasks, are also included. Further details may be found in the individual annual reports.

1. Recruiting

Beginning in 1976 and lasting through 1981, when the student quota was reached, an MSU faculty member undertook an annual, month-long recruitment trip to expand and maintain contacts with key individuals and institutions in the Sahel. Among the various institutions contacted were USAID Missions throughout the Sahel; Ministries of Planning, Rural Development and Agriculture; universities; a number of research institutes and International Training Program Specialists for Agriculture in the USDA Office of International Training. The countries visited included Burkina Faso, Cape Verde, Chad, Gambia, Mali, Mauritania, Niger and Senegal.

Early on in the execution of the program, a number of problems arose in the identification and acceptance of candidates to the program. First, parent ministries would typically oversee the nomination of candidates reducing the power of minor or regional departments and institutions to either nominate qualified personnel or to identify important gaps in their pool of personnel skills. Second, because the Agriculture Manpower Development Program (AMDP) funds were fluid between as well as within countries, there was no guarantee that candidates from the Sahel would be among the recipients of AMDP scholarships. Finally, there was no agreement between MSU and USAID ensuring that MSU would be asked to consider for admission all candidates from the Sahel who were nominated for graduate training in agricultural economics. Collectively, these three problems hindered the identification of qualified candidates from an already limited recruitment pool.

The pool from which candidates could be drawn was originally restricted by: 1) the candidate's hesitation to join MSU due to the lack of equivalency of an American M.S. degree, 2) the limited number of individuals holding equivalents to an American B.S. degree, and 3) the frequent contractual condition that candidates chosen from the personnel of a development project had to enroll in the American

university affiliated with the project. Fortunately, some solutions to these problems were found during the course of the contract.

The M.S. degree had gained partial acceptance as the equivalent of a "Doctorat de Troisieme Cycle." It was suggested that work performed at MSU consisted of two years in excess of the "license" or "Maitrise." Originally, the M.S. degree was understandably confused with the Maitrise, which is the literal translation of masters. Through time and with the increase in familiarity with the program, the Sahel Master's Training Program gained popularity among potential candidates and relevant institutions making recruitment easier.

Of the Sahelian countries, Senegal and Mali consistently provided ample numbers of qualified nominees. The educational background typical of candidates from Chad, Mauritania, Niger and Gambia, however, was below the admissions requirements of the Graduate School at Michigan State. It became increasingly obvious that in order to maintain enrollments that represented a greater number of Sahelian countries, it was necessary for individuals with less than the equivalent of a B.S. to be considered for participation in the program. By 1978, the MSU Admissions Office was accepting some candidates with unusual and diverse academic backgrounds if the Department of Agricultural Economics certified that the student held the equivalent of a B.S. degree with respect to preparation for graduate study in the Department.

In addition, the Department of Agricultural Economics, in cooperation with the MSU Admissions Office, devised a preparatory course of study to upgrade the education of promising individuals lacking the necessary background. Their MSU program was extended to an average of four and a half years, including English training, and was comprised of courses in introductory economics and agricultural economics, mathematics and statistics. To qualify, the candidate had to have three years of technical training beyond the secondary level. After the prescribed

preparation, the student was awarded a B.S. and was accepted into the graduate program if the student had a B average or better. As students proved their abilities to complete an M.S. program with such diverse backgrounds, USAID showed more willingness to finance preparatory studies.

Two further recruitment problems that persisted throughout the life of the contract related to the nomination of highly qualified candidates. First, excellent recent university graduates who desired further academic training could easily acquire adequate financing for their studies at French universities. Second, government agencies tended to resist the release of their best employees. The fear that program participants would remain abroad or be placed in alternative positions once they returned home provided an incentive for employers to nominate below average candidates.

Even with the existence of these problems, MSU faculty were able to recruit more than an adequate pool of students. While the contract commitment was to enroll 26 students, 26 successfully completed the M.S. program by April 1985, two others encountered academic difficulty in Agricultural Economics but were able to complete an M.A. degree in the College of Education, and three more are expected to complete the M.S. in Agricultural Economics in the next few months.

2. English and Introductory Economics Training

The contract originally specified Atlanta University Center and Howard University as appropriate English training centers. Both were repeatedly contacted regarding their ability to perform this function and MSU provided assistance in developing program proposals. However, after unsuccessful submission of program proposals to USAID, representatives of these universities indicated that neither institution was able to initiate the expense of such a language training program based on the limited, short-term demand of the Sahel Master's Training Program. Alternatively, the USAID International Training Office, the principal coordinator of

the language training, arranged for candidates to attend either ALIGU at Georgetown or the Economics Institute in Boulder. The Institute also provided courses in economics, mathematics and statistics as an integral part of the program.

The extent of English language training required ranged from three to six months. Those students exhibiting good progress by their third month were transferred to the English Language Center at MSU where they could begin their M.S. course work while continuing their English instruction. Generally, students found six months of English training sufficient and more than half took at least one lower-level statistics or mathematics course in the second three-month period.

3. Tailoring the M.S. Program to Meet Sahelian Students' Specific Professional Needs

All students admitted to the M.S. program in Agricultural Economics followed a well-defined course of study which included a major field or at least 24 credits and a minor field of 12-15 course credits. A minimum of 48 credits with a grade point average of at least 3.0 was required for graduation.

All Sahelian students were required to take agricultural development as a minor field of study. They were expected to take Terms, Concepts and Fields of Agricultural Economics, Agriculture in Economic Development, and Agricultural Policy in Sub-Saharan Africa. Two of the following three courses were required: Rural Development Administration, Data Collection in Developing Countries, and Development Planning and Agricultural Sector Analysis. Finally, students had to prepare and defend a research paper on a topic of direct relevance to agricultural development in the Sahel.

The research paper proved to be an extremely important part of each student's education. Initially, the students regarded the papers as no more than three credit term papers. However, the students quickly learned that the research paper required a real effort to synthesize their training in close collaboration with their major professors. As a result, the quality of first (and subsequent) drafts improved.

Moreover, the paper proved to be a major source for growth in their self-confidence and in their professional capabilities.

Agricultural Policy in Sub-Saharan Africa was developed and taught specifically for the Sahelian students. The course exposed students to particular problems and concerns related to policy-oriented analysis and agricultural development in Sub-Saharan Africa. (See Appendix D for course outline and reading list.)

During the summer of the 1981-82 academic year, students were encouraged to participate, formally or informally, in a special summer training program offered in conjunction with another MSU project funded by USAID. Two students enrolled for academic credit and several others visited the Senegal Project Summer Training Institute, which included courses in Farming systems Research, use of micro-computers and use of programmable calculators. (See Appendix E for the course outline.)

Finally, efforts to establish a degree equivalency between the American M.S. and the French "Doctorat du Troisieme Cycle" had varying degrees of success depending on the country in question. The efforts did make government officials more aware of the nature of the U.S. master's programs and especially the Sahel Master's Training Program. Full equivalency would have enhanced the contributions of an M.S. degree to the student's career objectives.

4. Supporting the Sahelian Participants in their Course Work

Students coming from the Sahelian countries generally have had no more than two to four years of high school English. They could not be expected to compete on equal terms with domestic students after only three to six months of English language training. For this reason, the Department established an introductory technical language/discipline familiarization course aimed specifically at foreign students. The course, Terms, Concepts and Fields of Agricultural Economics, originally had two objectives: 1) to familiarize students with the terms and

technical subject matter of agricultural economics as a discipline, and 2) to improve the students' abilities to read, write and speak English. Experience in teaching the course revealed a need for expansion in the course objectives. Overall, students performed below expectations, largely due to a lack of familiarity with the American educational system. Therefore, instruction on preparing for and taking examinations was added and course meetings were lengthened from three to six hours per week. (See Appendix C for course outline and reading list.)

During their first year of study, students received special tutorial assistance for English and other specific courses. Since most students took the same courses during their first year of the program, extra weekly review and discussion sessions were arranged. During these sessions, material from the preceding week was discussed with specific reference to their applicability in the Sahel. In addition, a graduate assistant provided students with editing assistance for papers assigned in other courses and for refinement of their required major research paper.

5. In-the-Field Consultation with Program Graduates

The initial plan to send faculty overseas specifically for in-the-field consultation with graduates of the program proved to be an unnecessary expense. Since various members of the faculty of the Department travelled to the Sahel on annual recruitment trips, for conferences and to fulfill obligations to other USAID funded departmental projects, it was decided that in-the-field consultation would be worked into these schedules with little additional cost and no reduction in the quality of services. In this manner the Department was able to provide more frequent and regular consultation than would have been possible if independent trips were undertaken. In addition, mail contact was used to inquire about their progress and need for department publications related to international agricultural development or other assistance. Such assistance was provided on a more continuous basis than would have been possible with overseas travel alone.

6. Assisting with Replication of this Training

Repeated contacts were made with Virginia State, Southern University and North Carolina A&T to inform them of the nature of the Sahel Master's Training Program and to offer them assistance in developing programs with similar objectives. However, none of them viewed such a program as a high priority activity.

Faculty on recruiting trips or travelling in the Sahel for other reasons have visited many universities and schools. There has not been a great deal of interest in developing master's level programs. The heritage of the French university system relegates agriculture to a technical school rather than a university. Recently there has been interest in a master's degree program at CIRES and they now plan to start a program in September 1985. Dr. Achi Atsain plans to visit Michigan State University to discuss our Sahel Master's Training program and our regular program. Dr. Thomas Eponou, Ph.D. from Michigan State, and Paul Perrault with the Agricultural Development Council are other key personnel.

Additional Administrative Matters

Although there were a number of minor recurring administrative problems, two in particular are relevant to the execution of future training programs similar to the Sahel Master's Training Program. First, the delays in reimbursements for thesis-related expenses and in response to requests for individual program extensions cause considerable psychic costs to the students and staff who worked with the students. Part of the problem stemmed from the fact that different students preferred different channels of communication, working directly with their sponsors or through MSU staff of the Department of Agricultural Economics, or the MSU Office for International Students and Scholars. This confusion could be reduced in the future if appropriate communication channels were identified and outlined in anticipation of likely administrative requests from students.

Second, a high percentage of the students required extensions in their individual programs. Although these extensions were granted in all cases, students often suffered

from the uncertainty, delays and confusion associated with processing their requests. For some, extensions meant an additional burden of altering academic and post-academic schedules, making them less attractive than could otherwise be organized under an originally longer program. Therefore, programs in the future should grant more time to students for completing their course work.

APPENDIX A

STATUS OF M.S. TRAINING ENROLLEES AS OF DECEMBER 1984

Country	Name	Previous Institutional Affiliation	Enrollment Status December 1984
Burkina Faso	Adama Bonkian*	ICRISAT	M.S. Program
Mauritania	Demba Diop*	Ministry of Agriculture	M.S. Program
Senegal	Danielle Dedegbe*	University of Dakar	M.S. Program
Senegal	Cheikh Ly**	ISRA	M.S. Program
Senegal	Fadel Ndiame**	ISRA	M.S. Program

*Expected to complete within the next few months

**Completed April 1985

APPENDIX B (1 OF 4)

GRADUATES OF THE MSU SAHEL MASTER'S TRAINING PROGRAM, AS OF DECEMBER 1984

Name	Country	Previous Institutional Affiliation	Completion Date	Source of Financial Aid	Reserch Topic
Ekoue Assionbon	Togo	INA - Paris	June 1982	AID/Sahel Training	Cocoa Prospect for Togo
Dramane Coulibaly	Mali	Ministry of Rural Development	March 1980	AID/Sahel Training	Analysis of Rice Supply and Demand in the Ivory Coast
Parateba Diendere	Burkina Faso	University of Ouagadougou	August 1983	AID/Sahel Training	Supply/Demand Analysis of Millet and Sorghum in Upper Volta
Mamadou Diallo	Senegal	SAED	June 1981	AFGRAD	Comparative Analysis of Rice Irrigated Perimeters in the Senegal River Valley
Oumar Fall	Mauritania	Ministry of Interior	December 1983	AID/Sahel Training	Rice Policies and Priorities in Mauritania
Matar Gaye	Senegal	University of Dakar	December 1983	AID/Sahel Training	The Food Challenge in the Senegalese Rural Economy: The Analysis of the Domestic Cereals Promotion Policy
Aboubakar Kourouma	Senegal	SODIFITEX	June 1982	AID/Sahel Training	The Efects of Export and Food Crop Strategies on Farm Income and Food Self-Suffiency in Eastern Senegal and Upper Casamance: A Linear Programming Analysis

APPENDIX B (2 OF 4)

Name	Country	Previous Institutional Affiliation	Completion Date	Source of Financial Aid	Reserch Topic
Sekou Hebie	Burkina Faso	University of Ouagadougou	March 1985	AID/Sahel Training	A Descriptive and Econometric Analysis of Relationships in the Rice Subsector of Burkina Faso
Sanda Maina	Niger	Ministry of Rural Development	March 1982	AID/Sahel Training	On Food Security in Niger Republic: An Economic Analysis of Millet and Sorghum Yield and Acreage Responses
Makan Makadji	Mali	OMBEVI	March 1985	African-American Institute	Industrialization of Livestock Slaughter and Meat Processing in the Sahel: the Gaps Between Social Roles and Economic Performance
Makhona Mbaye	Senegal	University of Dakar	June 1983	AID/Sahel Training	Implementation and Evaluation of Rural Development Projects
Amadou Niane	Senegal	Ministry of Planning	January 1980	AID/Sahel Training	The Supply and Demand of Millet and Sorghum in Senegal
Lamine Niang	Senegal	ISRA	August 1982	AID/Sahel Training	Comparison of Methods for Collecting Input-Output Data
Al Haji Alioune Njie	Gambia	Ministry of Agriculture	June 1983	AID/Sahel Training	Agricultural Credit in the Less Developed Countries
Ismael Ouedraogo	Burkina Faso	Ministry of Environment	December 1980	AID/Sahel Training	A Preliminary Analysis of Agricultural Marketing Characteristics of Farmers in the Eastern Region of Upper Volta

APPENDIX B (3 OF 4)

Name	Country	Previous Institutional Affiliation	Completion Date	Source of Financial Aid	Reserch Topic
Jean-Pierre Rigoulot	Senegal	Ministry of Rural Development	January 1980	AID/Sahel Training	An Analysis of Constraints on Expanding Rice Output in the Casamance
Dafotigui Sako	Mali	Ministry of Planning	June 1981	AFGRAD	An Analysis of the Supply Response in Traditional Agriculture: A Case Study of Millet, Sorghum, and Rice Farmers in Mali
Ibrahama Sene	Senegal	Ministry of Rural Development	June 1980	AID/Sahel Training	Farmers' Behavior Toward New Technology: The Senegalese Case
Herminaldo Sousa Brito	Cape Verde	Northeastern University	December 1982	AID/Sahel Training	An Analysis of Supply and Demand Conditions for Cape Verde's Banana Industry
Alassane Sow	Senegal	University of Dakar	August 1983	AID/Sahel Training	Government Food Import Policy: The Case of Rice in Senegal
Mariam Toure	Mali	Ministry of Finance	June 1981	AID/Sahel Training	A Comparative Analysis of and Returns to Cattle vs. Small Ruminant Production in Gao Region of Mali
Idrissa Traore	Mali	Ministry of Commerce	March 1983	AID/Sahel Training	Peanut in Mali: An Analysis of Acreage Response and Marketing Performance
Kassim Traore	Burkina Faso	Institut Timisoara Romania	March 1985	AID/Sahel Training	A Study of the Cotton Subsector in Burkina Faso

APPENDIX B (4 OF 4)

Name	Country	Previous Institutional Affiliation	Completion Date	Source of Financial Aid	Reserch Topic
El Hadji Amadou Wone	Mauritania	Mauritania Development Bank	June 1981	AID/Sahel Training	Dependency Theory and Development Economics: An Assessment of Samir Amin's Views
Assoumane Baoua*	Niger	Ministry of Rural Development	December 1981		
Moctar Sidi Traore*	Mali	Ministry of Rural Development	August 1983	AID/Sahel Training	

* Graduated from College of Education (no reserch paper required).

Appendix C

Tom Zalla
Spring 1981

Class Hours: 3-3:50 MTWF
Classroom: 105 SLS
Office Hours: 4-5:00 MTWF

SYLLABUS FOR FSM 480
(four credits)

Terms, Concepts, and Fields of Agricultural Economics

I. Course Objectives

A. This course is aimed primarily at foreign students not familiar with Agricultural Economics as a discipline nor the American system of higher education. Its specific objectives are:

1. To introduce students to several areas of Agricultural Economics, the technical vocabulary, and main concepts of each

2. To improve students' ability to express themselves and their ideas clearly and concisely both orally and in written papers

3. To familiarize students with examination procedures and techniques commonly used in American higher education

II. Course Organization

A. The course is divided into five segments of roughly eight classes each. During each of the segments, there will be a take-home problem relating to the material covered during that segment. The problem will be handed out on the first class day relating to each segment. Each student will solve the problem and write a policy paper discussing the nature of his findings and their implication for relevant agricultural policies. During the next to last class relating to the segment one or two students will be selected at random to make a 15 minute presentation of their conclusions to the class and lead a discussion on its policy implications.

B. Students are encouraged to work in teams on the take-home assignments in order to improve their understanding of how to approach the problem being analyzed. Each, however, must hand in his own paper and draw his own policy conclusions. Papers should be 800 words, excluding tables, and should either be typed or handwritten clearly, using every second line of the paper. The initial draft of these papers will be due on the date of the scheduled presentation.

C. During the week following the presentation of the first four papers, students will meet with a graduate assistant who will assist them with editorial and grammatical revision of their manuscript. A final typed draft of the revised paper will be due on the Friday following the week of the initial presentation. Students will have no editorial assistance with their fifth paper. The fifth paper will be due on June 3 and may be handwritten provided it is clearly written and uses every second line.

D. On the last class day of each segment there will be a 50 minute exam covering the material presented during that segment as well as that brought out in the student presentations.

III. Class Calendar

The schedule of class presentations and exams is as follows:

April 8	Production economics class paper due
April 10	Production economics exam
April 22	Farm management class paper due
April 24	Farm management exam
May 6	Agricultural finance class paper due
May 8	Agricultural finance exam
May 20	Agricultural marketing class paper due
May 22	Agricultural marketing exam
June 3	Project appraisal class paper due
June 5	Project appraisal exam
June 11	Final Exam 12:45-2:45 pm, 105 SLS.

IV. Grading and Exams

A. Final grades for the course will be computed as follows:

Class papers (5)	25%
Class presentations	20%
Bi-weekly exams (3)	30%
Final exam	25%

B. All class papers not submitted on time will be graded down one grade point for each class day they are late. In addition class papers less than 800 words in length will be graded down one grade point. The two lowest weekly exam grades will be dropped before calculating grades for this component. No deferred grades will be given for the course.

C. Exams will cover all material presented and discussed in class as well as the required readings. The bi-weekly exams will emphasize, but not be restricted to, material covered during that segment. The final exam will cover the entire term.

V. Texts

Required:

Harold Halcrow: Economics of Agriculture. McGraw-Hill; New York, 1980

Maxwell Brown: "Farm Budgets, From Farm Income Analysis to Agricultural Project Analysis," The Johns Hopkins University Press, Baltimore, 1980

John J. Dillon and J. Brian Hardaker: Farm Management Research for Small Farmer Development. FAO, Rome, 1980 (distributed in class).

Recommended:

Leonard F. Miller: Agricultural Credit and Finance in Africa. The Rockefeller Foundation, New York, 1977 (distributed in class)

IBRD: "Appraisal of an Agricultural Development Project: The Gambia;" IBRD, 1972, Mimeo (distributed in class)

John B. Penson, Jr., and David A. Lins: Agricultural Finance. Prentice-Hall, Inc., Englewood Cliffs, 1980.

VI. Course Outline

A. Introduction

1. Required readings

Halcrow, Chapters 1-3

2. Topics

a. the scope of agricultural economics
b. opportunity cost
c. economic growth

B. Production Economics

1. Required Readings

Halcrow, Chapters 4, 5, and 6, pp. 150-158

2. Optional Readings

Warren Vincent ed. Economics and Management in Agriculture. Englewood Cliffs; Prentice-Hall, Inc.; 1962. Chapters 3 & 4

3. Topics

a. law of diminishing returns
b. equal product curves or isoquants
c. production functions
d. stages of production
e. agricultural production decisions
f. comparative advantage
g. derivation of cost functions and optional level of output
h. value product concepts
i. two variable input-output functions
j. the equi-marginal principle
k. firm, partial equilibrium and aggregate supply functions
l. supply response of food crops under risk and unc tainty among African peasants

C. Farm Management

1. Required readings:

Brown, Chapters 1-3

Dillon and Hardaker, Chapters 3-6

2. Optional Readings:

Jean Pierre Rigoulot, "An Analysis of Constraints on Expanding Rice Output in the Casamance Region of Senegal," MSU Department of Agricultural Economics, M.Sc. Research Paper, 1979.

Ibrahima Sene, "Farmers' Behavior Towards New Technology: The Senegalese Case," MSU Department of Agricultural Economics, M.Sc. Research Paper, 1980.

3. Topics

a. scope, nature and objectives
b. managerial functions
c. risk and uncertainty
d. farm income concepts
e. simple data analysis
   (1) tabular analysis
   (2) measures of performance
   (3) comparative analysis
f. whole farm planning
g. partial budget analysis
h. input-output budget analysis
i. production function estimation and analysis

D. Agricultural Finance

1. Required readings:

Miller, entire book

Brown, Chapter 4

2. Optional reading:

Penson and Lins, Chapters 2, 3 and Chapter 6, pp. 130-138

3. Topics

a. role of credit and financial intermediaries
b. interest rates and interest rate policy
c. credit transaction costs and borrowing costs
d. records and analytical tools for financial management
e. analysis of farm financial statements
f. discounting and capital budgeting
g. govarnment financial institutions - problems encountered
h. approaches to small farmers' finance problems

E. Agricultural Marketing

1. Required reading:

Halcrow, Chapter 6, pp. 158-182; Chapter 7

H.J. Mittendorf, "Methods of Assessing the Demand of Internal and External Markets," in Problems and Approaches in Planning Agricultural Development, Proceedings of Joint Seminar; Addis Ababa, 1976. HD.2118.1968. J8., pp. 145-153.

CILSS and Club du Sahel, Marketing, Price Policy and Storage of Food Grains in the Sahel, Vol. I, CRED: Ann Arbor, August 1977, pp. 9-20.

2. Optional readings:

Ismael Ouedraogo, "The Economics, Management, and Policy Issues of Storage and Reserves in the Food Marketing System: The Developing Countries Context," mimeo, 1977. Folder 480-1.

Amadou Niane, "Supply and Demand of Millet and Sorghum in Senegal," MSU Department of Agricultural Economics, M.Sc. Research Paper, 1979, pp. 11-39.

Dramane Coulibaly, "An Analysis of Rice Supply and Demand in the Ivory Coast," MSU Department of Agricultural Economics, M.Sc. Research Paper, 1979.

3. Topics

a. marketing activities and functions
b. demand and derived demand
c. determinants of demand for resources
d. individual, firm, partial equilibrium and aggregate demand functions

e. elasticity of demand and demand projections
f. elasticity of supply and supply projections
g. the structure-conduct-performance concept
h. characteristics of agricultural markets in Sahelian West Africa
i. important policy issues relating to agricultural markets in the Sahel

F. Agricultural Project Appraisal

1. Required readings:

P.B. Diebold, "Project Evaluation," in Problems and Approaches in Planning Agricultural Development, Proceedings of a Joint Seminar organized by The German Foundation for Developing Countries, 16 October - 7 November 1967 in Addis Ababa, pp. 155-160.

Brown, Chapters 4, 7 and 8

IBRD, "Appraisal of an Agricultural Development Project: The Gambia," IBRD, 1972, mimeo, pp. 1-30 (distributed in class).

2. Optional readings:

Brown, Chapter 5

3. Topics

a. critical role of project design and the macro-planning context
b. time value of money and discounted measures of project worth - a review
c. with and without project measures of cost and returns
d. valuing inputs and outputs and computation of shadow prices
e. financial and economic analyses
f. presentation of Gambia irrigated rice project for class analysis

Appendix D

Summer, 1982
Tom Zalla, Seminar Coordinator

AGRICULTURAL ECONOMICS 882

Agricultural Policy in Sub-Saharan Africa

A. Course Objectives

This course applies the principles of various aspects of agricultural economics in order to analyze and draw specific policy conclusions concerning problems of agricultural development in sub-Saharan Africa. Students will be exposed to an analysis of particular problems and concerns through a series of seminars given by speakers from both within and outside the department. Active student participation will be an important way for the students to demonstrate their ability to examine critically both the readings and the presentation of the speaker.

B. Seminar Format

The class will meet from 2:00-4:45 p.m. every Monday in Room 309, Agriculture Hall and at other times as may be required to accomodate visiting speakers. Each week a speaker will present a new topic for which background reading has been assigned. Copies of the readings will be on Assigned Reading in the main library.

Each seminar will be preceeded by a 20 minute quiz on the readings assigned for that particular seminar. The guest speaker will follow with a 45-60 minute presentation. The seminar will then open-up to questions and comments from the floor, including interested persons not enrolled in the course. After 25-30 minutes of public discussion; non-registered participants will be asked to leave. After a brief intermission seminar participants will again reconvene for a final period of questions, answers, criticism and other observations.

C. Grading

Students will be graded on the basis of their responses to the quizzes on the assigned readings and on the basis of their participation in the seminars. For grading purposes "good" participation is that which brings to bear economic theory, critical analysis, and observations from personal experience which contribute to a better understanding of the policy issues involved. "Poor" participation is the failure to contribute to the discussion in a meaningful way. This would include no contribution as well as contributing material which does not relate to the topic under discussion, or which reflects a failure to do the assigned readings or apply the relevant theory to the issues under discussion.

All quizzes which are not taken as scheduled will be graded as zeros unless prior approval is obtained from the seminar coordinator. There will be no mid-term or final exam. The distribution of the grades will be as follows:

Quizzes	75%
Seminar Participation	25%.

No deferred grades will be given for the course.

D. Schedule of Speakers, Topics and Required Readings

Date	Speaker	Topic and Readings
July 6	Jim Bingen	The Organization of U.S. Foreign Aid for the Sahel

Required Reading: General Accounting Office. "U.S. Development Assistance to the Sahel: Progress and Problems." Washington, D.C., GAO Report to the Congress, March 29, 1979. Read up to page 33.

Optional Reading: T.W. Schultz. "Economic Distortions by the International Donor Community." Agricultural Economics Paper No. 81:8, University of Chicago, 1981.

July 13 — Ken Shapiro — Policy Issues in Developing the Livestock Industry

Required Reading: Kenneth H. Shapiro. "The Livestock Economics of Central West Africa: An Overview" in Livestock Production and Marketing in the Entente States of West Africa edited by Kenneth H. Shapiro, CRED/USAID, 1979.

One additional reading to be assigned.

July 20 — Manfred Thullen — Policy Issues Related to Agricultural Extension

Required Reading: E.B. Rice. Extension in the Andes: An Evaluation of Official U.S. Assistance to Agricultural Extension Services in Central and South America. AID Evaluation Paper 3A, USAID, 1971, pp. 417-429.

Ben Stavis. Agricultural Extension for Small Farmers. Rural Development Working Paper No. 3, Michigan State University, East Lansing, 1979, Sections B, D, and F.

July 27 — No class

Date	Speaker	Topic and Readings
Aug. 3	Edouard Tapsoba	Credit Policies for Small Farmers

Required Reading: Thomas Stickley and Edouard Tapsoba. "Loan Repayment Delinquency in Upper Volta" in Borrowers and Lenders, edited by John Howell. London, Overseas Development Institute, 1980.

Additional reading to be announced.

Aug. 10 Eric Crawford Animal Traction in West Africa

Required Reading: Eric Crawford, David Wilcock, and Gregory Lassiter. "The Farm-Level Impact of Animal Draft Power: Survey Results from Upper Volta." Agricultural Economics Staff Paper No. 81-15, Michigan State University.

Merritt W. Sargent, John A. Lichte, Peter J. Matlon and Roger Bloom. An Assessment of Animal Traction in Francophone West Africa. African Rural Economy Working Paper No. 34, Michigan State University, 1981, Parts I, III, and V.

Aug. 17 David Dunlop Health Aspects of Large-Scale Water Development Projects

Required Reading: C.C. Hughes and J.M. Hunter. "Disease and Development in Africa" in Social Science and Medicine, Vol. 3, pp. 443-493, 1970.

Additional reading to be announced.

Aug. 24 Wilfred Morris Medium Scale Versus Small Scale Irrigation Projects

Required Reading: Ed. W. Sparling. "A Survey and Analysis of Ex-Post Cost-Benefit Studies of Sahelian Irrigation Projects." Department of Economics, Colorado State University, Fort Collins, 1981. Mimeo.

J.L. Boutillier. "Irrigated Farming in the Senegal River Valley." Paper presented to the Workshop on Sahelian Agriculture, Purdue University, May 1980.

CILSS. "The Development of Irrigated Agriculture in the Sahel, Review and Perspectives." Club du Sahel, CILSS, April 1980, Sahel D (80) 75.

Date	Speaker	Topic and Readings
Aug. 27	Alberto Valdés	The Role of the State in Food Policy

Required Reading: John Mellor. "Facing the Food Challenge in sub-Saharan Africa." Statement to the IFPRI Board of Trustees Meeting at the University of Ibadan, Nigeria, February 9-13, 1981.

Uma Lele and Wilfred Candler. "Food Security: Some East African Considerations" in Food Security for Developing Countries edited by Alberto Valdés. Westview Press, Boulder, Colorado, 1981.

Additional reading to be announced.

There may be one other session scheduled during the month of August. Students will be notified of changes in dates and additional assigned readings as these become available.

APPENDIX E (1 of 4)

SENEGAL PROJECT SUMMER TRAINING INSTITUTE. FARMING SYSTEMS RESEARCH IN WEST AFRICA
July 6 - August 6, 1982 Michigan State University
Course Outline and Schedule of Events

Date	Hours	Location	Topic	Reading Assignment (Remarks)	Responsibility *=morning only **=afternoon only
W 7/7	10-12 1-3	304 EBH	Course Objectives and Procedures Introduction To Farming Systems Research	Shaner, et al: pp 1-20	Fienup, Vincent, Franzel, Crawford* Freed**
	3-4	100 CIP	Orientation: African Studies Center		Kelly, ASC Staff
	4-5	Main library	Orientation: Sahel Documentation Center		Library Staff
Th 7/8	8-10	120 CC	Introduction to Microcomputers	Shrum: chapters 1 & 2	Winder
	10-12 1-3	304 EBH	Determinants of Farming Systems with Special Reference to Senegal	(Workshop/Discussion)	Vincent, Crawford, Freed, Franzel
	3-5	307 CC	Microcomputer Lab (Groups 1 & 2)	(Study Period for Groups 3,4,5,6)	Kelly/Winder
F 7/9	8-10	307 CC	Microcomputer Lab (Groups 3 & 4)	(Study Period for Groups 1,2,5,6)	Kelly/Winder
	10-12 1-3	304EBH	FSR Target Area Selection A Scheme For FSR Research	Shaner, et al: chapter 4 IADS Occational Paper	Franzel, Crawford*, Vincent**
M 7/12	8-10	304EBH	TI-59 Programmable Calculator, Today's Electronic Calculator Manual Operations	Aronofsky, et al: chapters 1,2,3	Hepp
	10-12 1-3	304EBH	Problem Identification and Research Priorities for FSR; Informal Surveys for FSR	Shaner, et al: chapter 5	Franzel, Freed, Vincent** Crawford*
	3-5	215 CC	Microcomputer Statistical Packages	Mimeo Handouts	Kelly
T 7/13	8-10	304EBH	TI-59 Programmable Calculator Operation using Existing Programs	Aronofsky, et al: chapter 4 and 7	Hepp
	10-12	304EBH	Field Trip Planning and Preparation		Hepp, Vincent, Crawford, Freed, Extension Staff
	1-3	304EBH	Informal and Verification Suveys in FSR		Franzel, Freed
	3-5	307 CC	Microcomputer Lab (Group 1)	(Study Period for Groups 2-6)	Kelly/Winder
W 7/14	7:30 - 5 PM	Barry County	FSR Field Trip and Informal Survey		Hepp, Vincent, Crawford, Franzel Freed, Extension Field Staff

APPENDIX E (2 of 4)

SENEGAL PROJECT FSR TRAINING INSTITUTE COURSE OUTLINE AND SCHEDULE OF ACTIVITIES

Date	Hours	Location	Topic	Reading Assignment (Remarks)	Responsibility * =morning only **=afteroon only
TH 7/15	8-10		TI-59 Programming Basics	Aronofsky, et al: chapter 5	Hepp
	10-12	304EBH	Informal Survey Findings; Field Trip		Vincent, Crawford, Franzel;** Freed*, Hepp*
	1-3		Formal Surveys: Survey Design and Survey Questionaire	Mimeo Handouts	
	3-5	307 CC	Microcomputer Lab (Group 2)	(Study Period for Groups 1,3-6)	Wolf, Staff
F 7/16	8-10	304EBH	TI-59 Advanced Programming Techniques	Aronofsky et al: chapters 8 and 9	Hepp
	10-12 1-3		Formal Surveys: Non-Sampling Errors During Conduct of Survey in the Field	Mimeo Handouts	Vincent
	3-5	307 CC	Microcomputer Lab (Group 3)	(Study Period for Groups 1,2,4-6)	Wolf, Staff
S 7/17	10-12	MSU Plots	Agronomic Research Field Trip		Freed
	12-3	Park	Class Picnic with Faculty	Plans Tentative	Ward, Fienup
M 7/19	8-10	304EBH	TI-59 Internal Routines & Library Modules	Aronofsky et al: chapter 6	Hepp
	10-12 1-3		Formal Surveys: Non-Sampling Errors in Data Handling/Processing/Analysis	Mimeo Handouts	Vincent
	3-5	307 CC	Microcomputer Lab (Group 4)	(Study Period for Groups 1,2,3,5,6)	Wolf, Staff
T 7/20	8-10	304EBH	TI-59 Printer Application Programs	Aronofsky et al: chapter 7	Hepp
	10-12		Formal Survey: Special Measurement Problems	Mimeo Handouts	Vincent
	1-3		Field Trip Planning and Preparation		Hepp, Vincent, Crawford
	3-5	307 CC	Microcomputer Lab (Group 5)	(Study Period for Groups 1-4,6)	Wolf, Staff
W 7/21	7:30 - 5 PM	Hastings Michigan	Support Institutions for Barry County Farmers	(Field Trip including Agricultural Fair)	Hepp, Vincent, Crawford
TH 7/22	8-10	307 CC	Microcomputer Lab (Group 6)	(Study Period for Groups 1-5)	Winder, Kelly
	10-12	304EBH	Discuss Field Trip Findings		Vincent
	1-3		Conducting On-Farm Research	Shaner, et al: chapter 6	Crawford, Freed
	3-5	215 CC	VISICALC; Spread Sheet Programs for Micros.	Mimeo Handouts	Brown
F 7/23	8-10	4 AGH	Microcomputer Lab (Group 1)	(Study Period for Groups 2-6)	Winder, Kelly
	10-12	304EBH	Analyzing On-Farm Research	Shaner et al: chapter 7	Freed, Crawford
	1-3		Analyzing On-Farm Research		
	3-5	4 AGH	Microcomputer Lab (Group 2)	(Study Period for Groups 1,3-6)	Winder, Kelly

APPENDIX E (3 of 4)

SENEGAL PROJECT FSR TRAINING INSTITUTE COURSE OUTLINE AND SCHEDULE OF ACTIVITIES

Date	Hours	Location	Topic	Reading Assignment (Remarks)	Responsibility *=morning only **=afternoon only
M 7/26	8-10	4 AGH	Microcomputer Lab (Group 3)	(Study Period for Groups 1,2,4-6)	Winder, Kelly
	10-12 1-3	304EBH	Issues in Farming Systems Research	Shaner, et al: chapters 8 and 9 Collinson Gilbert,Norman, Winch	Crawford, Rohrbach, Franzel
	3-5	4 AGH	Microcomputer Lab (Group 4)	(Study Period for Groups 1-3,5,6)	Winder, Kelly
T 7/27	8-10	4 AGH	Microcomputer Lab (Group 5)	(Study Period for Groups 1-4,6)	Winder, Kelly
	10-12	Various	Campus - Consultations	(By appointment)	Fienup
	1-3	304EBH	Field Trip Planning and Preparation		Crawford, Hepp
	3-5	4 AGH	Microcomputer Lab (Group 6)	(Study Period for Groups 1-5)	Winder, Kelly
W 7/28	7:30 5 PM	Barry County	Revisit to Target Area (Tentative)		Hepp, Crawford
TH 7/29	8-10	215 CC	Introduction to Basic Programming	Mimeo Handouts	Winder
	10-12	304EBH	Field Trip Discussion; Hand Out Exam		Crawford, Hepp
	1-3	307 CC	Microcomputer Lab (Group 1)	(Study Period for Groups 2-6)	Winder, Kelly
	1-3	307 CC	Microcomputer Lab (Group 2)	(Study Period for Groups 1,3-6)	Winder, Kelly
F 7/30	8-10	307 CC	Microcomputer Lab (Group 3)	(Study Period for Groups 1,2,4-6)	Winder, Kelly
	10-12		Microcomputer Lab (Group 4)	(Study Period for Groups 1-3,5,6)	
	1-3		Microcomputer Lab (Group 5)	(Study Period for Groups 1-4,6)	
	3-5		Microcomputer Lab (Group 6)	(Study Period for Groups 1-5)	
M 8/2	8-5	Various	Campus Consultations (Take Home Final Exam to be turned in.)	(By appointment)	Fienup
T 8/3	8-12	304EBH	Discussion of Final Exam Course Evaluation		Crawford
	1-5		Open		
W 8/4	8-12	304 EBH	Research Opportunities in Senegal		Crawford, Bingen ISRA Representative
	1-5		Research Workshop		

APPENDIX E (4 of 4)

SENEGAL PROJECT FSR TRAINING INSTITUTE COURSE OUTLINE AND SCHEDULE OF ACTIVITIES

Date	Hours	Location	Topic	Reading Assignment (Remarks)	Responsibility *=morning only **=afternoon only
TH 8/5	8-12	304EBH	Workshop Feedback		Crawford, Bingen ISRA Representative
	1-5	Open	Discussions as Arranged		Fienup, Crawford
F 8/6	8-5	Open	Discussions as Arranged Predeparture Arrangements		